

STATEMENT OF WORK (SOW)
for the
INSPECT REPAIR ONLY AS NECESSARY (IROAN)
of the
MINE CLEARANCE LAUNCHER, MK 154

NSN 1055-01-226-6338

B1315

TABLE OF CONTENTS

SECTION/PARAGRAPH	PAGE
1.0 SCOPE	1
1.1 Background	1
2.0 APPLICABLE DOCUMENTS	1
2.1 Military Specifications	1
2.2 Military Standards	1
2.3 Other Government Documents and Publications	2
2.4 Industry Standards	3
3.0 REQUIREMENTS	3
3.1 General Tasks	4
3.2 Detail Tasks	4
3.2.1 Phase I – Pre-Induction	3
3.2.2 Phase II –IROAN	4
3.2.3 Phase III - Inspection, Testing and Acceptance	6
3.2.4 Phase IV - Packaging, Handling, Storage, and Transportation (PHS&T)	6
3.3 Configuration Management	7
3.3.1 Configuration Status Accounting (CSA)	7
3.3.2 Configuration Control	7
3.4 Quality Assurance Provisions	7
3.5 Acceptance	7
3.6 Rejection	8
3.7 Government Furnished Equipment(GFE)/Government Furnished Materiel (GFM)	8
3.8 Contractor Furnished Materiel (CFM)	8
3.9 Pre-Induction Checklist	8
	8
	8
	9

TABLE OF CONTENTS

SECTION/PARAGRAPH		PAGE
Appendices		
Appendix A	Pre-Induction Inspection Checklist	A-1
Appendix B	List of Defective Parts and Assemblies	B-1
Appendix C	List of Repair Parts and Assemblies Required for Repairs	C-1

STATEMENT OF WORK (SOW)
for the
INSPECT REPAIR ONLY AS NECESSARY (IROAN)
of the
MINE CLEARANCE LAUNCHER, MK 154
NSN 1055-01-226-6338

1.0 SCOPE. This Statement of Work (SOW) establishes, sets forth tasks and identifies the work efforts that shall be performed by the Contractor in the IROAN effort of the Mine Clearance Launcher MK 154, hereafter referred to as the MK 154. This document contains requirements to restore the MK 154 to Condition Code "A". Condition Code "A" is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitation or restriction, including materiel with more than six months shelf-life remaining". National Stock Number (NSN) 1055-01-226-6338 shall be known as the MK 154.

1.1 Background. IROAN is defined as "That maintenance technique which determines the minimum repairs necessary to restore equipment components or assemblies to prescribed maintenance serviceability standards by utilizing all available diagnostic equipment and test procedures in order to minimize disassembly and parts replacement".

2.0 APPLICABLE DOCUMENTS. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Specifications

MIL-C-46168	Coating, Aliphatic Polyurethane, Chemical Agent Resistant
MIL-C-53039	Coating, Aliphatic Polyurethane, Single Component, Chemical Agent Resistant

2.2 Military Standards

MIL-STD-129	DoD Standard Practice: Military Marking for Shipment and Storage
MIL-STD-130	Identification Marking of US Military Property

MIL-STD-461	Requirements for the Control of Electromagnetic Interference Emission and Susceptibility
MIL-STD-3003	Vehicles, Wheeled: Preparation for Shipment and Storage of

2.3 Other Government Documents And Publications

DOD 4000.25-1-M	Military Standard Requisitioning and Issue Procedures (MILSTRIP) Manual
DOD 4160.21-M-1	Defense Materiel Demilitarization Manual
DOD 4160.21-M	Defense Disposition Manual
SL-3-09962A	Launcher, Mine Clearance MK 154 Mod 0
TM 09962A-13&P/2	Mark 1 Mod 0 Mine Clearance System
MI-09962A-20/1	Elevation Cylinder Sleeve Stabilization
TI-09962A-35/1	Fabrication and Installation of Electrical Connector Guard for the Launcher, Mine Clearance MK 154
TM 3080-12	Corrosion Prevention and Control for Marine Corps Equipment
TM 3080-50	Corrosion Control Procedures Depot Maintenance Activities for Marine Corps Equipment
TM 4700-15/1H	Ground Equipment Record Procedures
TM 4750-15/1	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment
TM 4750-15/2	Camouflage Paint Patterns
Engineering Drawing 835028A0000, CAGE 01365	Mine Clearance Launcher, MK154, Marine Corps

Engineering Drawing
835028B0000, CAGE 01365

Container Assembly for MK 154 Marine
Corps

Reversed Engineering Drawing
835028C0000, CAGE 01365

Mine Clearance Launcher, MK154, Marine
Corps

Military Handbooks (For Guidance)

MIL-HDBK-61

Configuration Management Guidance

2.4 Industry Standards

ANSI/ISO/ASQC Q9001-2000

Quality Management Systems - Requirements

Industry Standards (For Guidance)

ANSI/EIA-649

National Consensus Standard for
Configuration Management

Copies of Military Specifications and Standards are available from the DoD Single Stock Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, commercial telephone number (215) 697-2179 or DSN 442-2179 or on the Internet at <http://www.dodssp.daps.mil>. Copies of other government documents and publications required by contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Contracts Department (Code 891), P. O. Drawer 43019, 814 Radford Blvd., Marine Corps Logistics Command, Albany, GA 31704-3019, commercial telephone number (229) 639-6761 or DSN 567-6761. Copies of engineering drawings, if applicable, shall be obtained from Supply Chain Management Center, Attn: Code 566-1A, 814 Radford Blvd., Suite 20320, Albany, Georgia 31704-0320, commercial telephone number (229) 639-6476 or DSN 567-6476.

3.0 REQUIREMENTS

3.1 General Tasks. In fulfilling the specified requirements, the Contractor shall:

a. Provide materials, labor, facilities, missing parts, and repair parts necessary to inspect, diagnose, restore, and test the MK 154. Upon completion of IROAN, repaired equipment shall be Condition Code "A".

b. Provide all tools and test equipment required to test, inspect, repair, and calibrate the MK 154.

c. Conduct in process and final on-site testing to be witnessed by Marine Corps Systems Command (MCSC) Code PMM152, Albany, Georgia representatives.

d. Be responsible for all structural, electrical and mechanical requirements associated with the restoration of the MK 154.

3.2 Detail Tasks. The following tasks describe the different phases for IROAN of the MK 154.

3.2.1 Phase I - Pre-Induction. The contractor shall perform a Pre-Induction Inspection Analysis for each MK 154 using the Contractor's diagnosis, inspection and testing techniques to determine extent of work and parts required. This inspection shall include all items associated with the MK 154 as found in SL-3-09962A, TM 09962A-13&P/2, and TI-09962A-35/1. These findings shall be annotated on a Pre-Induction Check List (Appendix A) and shall be provided to Marine Corps Systems Command (Code PMM152), 814 Radford Blvd., STE 20343, Albany, Georgia 31704-0343.

3.2.2 Phase II - IROAN. After Pre-Induction Tests and Inspections have been completed, repair of the MK 154 shall be accomplished by the contractor in accordance with this SOW. Deficiencies noted on the Pre-Induction Checklist, (Appendix A), during Phase I shall be repaired/replaced. The contractor shall use the "List of Defective Parts and Assemblies (Appendix B)" to list all defective parts and assemblies. The contractor shall also use the "List of Repair Parts and Assemblies Required for Repairs (Appendix C)", to report the parts used on the repaired MK 154. Components or assemblies shall not be disassembled for replacement of mandatory parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair.

a. Pre-Induction Inspection Checklist - Information recorded on the Pre-Induction Inspection Checklist (Appendix A) shall be used as a guide to repair the MK 154 system in accordance with this SOW.

b. Technical Instruction (TI) - All TIs not previously applied to the MK 154 shall be applied during the IROAN and shall be annotated on Equipment Record Jacket in accordance with TM 4700-15/1H.

c. Corrosion - For corrosion prevention and treatment use TM 3080-12 and TM 3080-50.

d. Fluid Leaks - The following shall be used as a guide in determining degree of fluid loss:

(1) Class I - Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

(2) Class II - Leakage of fluid great enough to form drops, but not enough to cause drops to fall from the item being checked/inspected.

(3) Class III - Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

NOTE: A Class I leak, except in fuel or brake systems, is an acceptable condition at any time and does not require corrective action.

e. Belts - Replace all.

f. Data Plates - All required data plates and decals shall be in place and shall be legible. Each repaired MK 154 shall have an IROAN data plate affixed to the main unit in close proximity to the existing data plate. The data plate shall meet the requirements of MIL-STD-130 and TM 4750-15/1 and shall contain the Equipment Serial Number, date of IROAN, Date of SOW, SOW number, and Company name of contractor completing work.

g. Painting/Coating (Exterior/Interior) - If painting/coating is required, the MK 154 shall be cleaned in accordance with TM 3080-50, Chapter 4, and coated with Aliphatic Polyurethane Coating, in accordance with MIL-C-46168 or MIL-C-53039 using TM 4750-15/2 as pattern guidance if required.

h. Demilitarization - All end items that are identified as non-repairable and require demilitarization codes, shall be reported to the MCSC (Code PMM152), Albany, Georgia representatives, who will provide disposition instructions in accordance with DOD 4160.21-M-1 and DOD 4160.21-M.

i. Electromagnetic Emission - All requirements pertaining to control of electromagnetic interference, emission and susceptibility shall be in accordance with MIL-STD-461.

j. Hardware

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turnlock fasteners, mandatory, safety and one-time use items, etc., in accordance with TM 09962A-13&P/2. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present and operational on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

k. Hoses - All hoses and fittings shall be visually inspected for damage or deterioration. Any hose showing signs of leakage, kinking or separation of outer coating shall be replaced. This inspection shall be performed during the Operational Test Inspection (OTI) of the MK 154.

l. Cable Assemblies - All cables and cable connections shall be tested and visually inspected for damage or corrosion. Any cable or cable connector showing signs of damage, corrosion or separation of outer coating shall be repaired/replaced and tested with its respective component/assembly to assure satisfactory compliance with all operational tests.

m. Filters - Replace all.

3.2.3 Phase III - Inspection, Testing and Acceptance

a. The contractor shall conduct Inspection, Testing and Acceptance of the MK 154 in accordance with TM 09962A-13&P/2.

b. The Contractor shall be responsible for conducting required tests and shall ensure representatives from MCSC and Contractor maintenance personnel, are available to complete the final acceptance. Acceptance tests shall be held at the Contractor Facility. MCSC Code PMM152, Albany, Georgia, representatives shall be given a minimum of two weeks notice prior to beginning acceptance testing. The test area shall be cleared of all equipment parts, components, etc., not required for the test.

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MCSC, Code PMM152, Albany, Georgia, representatives may require the Contractor to repeat tests, or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

d. Acceptance Testing/Operational Tests on all MK 154 repaired under the provisions of this SOW shall be accomplished, by the contractor, in accordance with TM 09962A-13&P/2. Operational Tests are to be conducted on each MK 154 upon completion of repairs and prior to the equipment being returned to stock, to insure the unit will perform as required.

3.2.4 Phase IV - Packaging, Handling, Storage, and Transportation (PHS&T).

a. The Contractor shall be responsible for preservation and packaging of item(s) being repaired under the terms of this Statement of Work. Items scheduled for long-term storage or shipment to overseas destinations shall be in accordance with Level "A" requirements of MIL-STD-3003. Items scheduled for domestic shipment for immediate use or short-term storage shall be to Level "B" requirement.

b. Marking for shipment and storage shall be in accordance with MIL-STD-129.

c. The Marine Corps will provide the contractor with the shipping address(es) for delivery of the repaired equipment. The contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps will be responsible for transportation costs associated with shipping the subject equipment to and from the contractor.

3.3 Configuration Management

3.3.1 Configuration Status Accounting (CSA)

a. The contractor shall record and submit data on retrofit accomplished during Phase II. Any approved Modifications Instructions (MIs) or Engineering Change Proposals (ECPs) not previously applied shall be incorporated during Phase II of the IROAN process.

b. The Contractor shall determine the application status of approved configuration changes by visual inspections to the extent possible. The government will identify the configuration changes to be inspected by furnishing a Configuration Inspection Checklist to the Contractor. The Contractor shall use one checklist per MK 154 to record the inspection findings along with other required data.

c. The Contractor shall record serial numbers of the assemblies listed on the Configuration Inspection Checklist. The Contractor shall also record the information on the Equipment Record Jacket in accordance with TM 4700-15/1H.

3.3.2 Configuration Control. The contractor shall apply configuration control procedures to established configuration items. The baseline configuration for the MK 154 has been established by Marine Corps Drawing numbers 835028A0000, CAGE 01365 (for the Mine Clearance Launcher), 835028B0000, CAGE 01365 (for the Container), along with applicable MIs and ECPs and Engineering Drawing 835028C0000, CAGE 01365 for the Reverse Engineering Drawings. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without prior written authorization. If it is necessary to temporarily depart from the authorized configuration, the contractor shall prepare and submit a Request for Deviation. MIL-HDBK-61 and ANSI/EIA-649 provide guidance for preparing this configuration control document.

3.4 Quality Assurance Provisions. The Contractor shall provide and maintain a Quality System that, as minimum, adheres to the requirements of ANSI/ISO/ASQC Q9001-2000 Quality Management Systems - Requirements.

3.5 Acceptance. The performance of the Contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site or location, and MCSC (Code PMM152), Albany, Georgia

representatives shall be permitted to observe the work or to conduct inspection during normal Contractor's working hours. Final Inspection and Acceptance Testing shall be conducted at the Contractor Facility. Final acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

3.6 Rejection. Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCSC (Code PMM152), Albany, Georgia. The Contractor shall, at no additional cost to MCSC (Code PMM152), Albany, Georgia, provide the following:

- a. Develop an approach for modification or correction of all deficiencies.
- b. Upon approval of a documented approach, the Contractor shall correct the deficiencies and repeat the verification until an acceptable compliance with acceptance test procedures is demonstrated.

3.7 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). The Management Control Activity (MCA) (Code 581-1B) will coordinate GFE/GFM requests and maintain a central control system on all government owned assets in the contractor's possession. The MCA will forward a GFE Accountability Agreement to the contractor for signature on an annual basis to establish a chain of custody and identify property responsibilities for Marine Corps assets. The contractor is to acknowledge receipt of GFM to the MCA within 15 days of receipt. This can be done by mailing a copy of the DD 1348 to Materiel and Distribution Management Department, Distribution Management Branch, Management Control Activity (Code 581-1B), 814 Radford Blvd., STE 20320, Albany, Georgia 31704-0320, or faxing a copy to commercial telephone number (229)639-5498 or DSN 567-5498.

3.8 Contractor Furnished Materiel (CFM). The Contractor may requisition materiel as required in the performance of the SOW through the DoD Supply System. DoD 4000.25-1-M (MILSTRIP), Chapter 11, provides guidance to contractors on the requisitioning process. The contractor's decision to utilize CFM procured from the DoD Supply System shall be based upon cost effectiveness, availability of materiel and the required completion/delivery date.

3.9 Pre-Induction Checklist. The Contractor shall complete the Pre-Induction Inspection Checklist (Appendix A), List of Defective Parts and Assemblies (Appendix B), and List of Repair Parts and Assemblies Required for Repairs (Appendix C), for each MK 154 repaired. These documents shall be available during final acceptance testing. One copy of each document shall be provided to Marine Corps Systems Command (Code PMM152), 814 Radford Blvd., Suite 20343, Albany, Georgia 31704-0343, 30 days after final acceptance of each MK 154 in PDF Format Media.

The Pre-Induction Inspection Checklist shall contain, but not be limited to the following:

- (1) MK 154 serial number. Appendix A, B, and C.
- (2) Condition Code of MK 154 at receipt. Appendix A.
- (3) Results of operational test. Appendix A.
- (4) List of defective parts and assemblies. Appendix B.
- (5) List of repair parts and assemblies required for repairs. Appendix C.
- (6) Corrosion prevention methods that shall be used will be documented on the first page of Appendix A.

Pre-Induction Inspection
Checklist
APPENDIX A

MK154 Serial number: _____ Condition Code at receipt: _____

Results of operational test:

Corrosion prevention methods that shall be used.

Inspect all components for operating/malfunction/defective parts per TM 09962A-13&P/2.
Visually check components for leaks, damage, loose parts & hardware. No disassembly of
components is allowed unless the component is determined to be defective.

Checklist APPENDIX A

COMPONENT	PASS	FAIL	REMARKS:
Mast Assy	_____	_____	_____
External-Actuator Cover	_____	_____	_____
Actuator Arm Lever	_____	_____	_____
Housing to Actuator Assy	_____	_____	_____
Hose Assy, Starboard	_____	_____	_____
Starboard Actuator Manifold	_____	_____	_____
Starboard Actuator Assy	_____	_____	_____
Housing-Actuator Hydraulic	_____	_____	_____
Hose Assy, Port	_____	_____	_____
Housing - Actuator Hydraulic	_____	_____	_____
System, Port	_____	_____	_____
Port Actuator Manifold	_____	_____	_____
Port Actuator Assy	_____	_____	_____
Starboard/Port Hinge Arm	_____	_____	_____
Starboard Door Assy	_____	_____	_____
Door Seals	_____	_____	_____
Door Latch Rod, Starboard Door	_____	_____	_____
Port Door Assy	_____	_____	_____
Wiring Harness W16	_____	_____	_____
Platform, Equipped for Access	_____	_____	_____
Launcher Cylinder Hydraulic Hose Assy	_____	_____	_____
Launch Cylinder Hose Assys	_____	_____	_____
Launcher Cylinder	_____	_____	_____
Launcher Cylinder Swivel Joint	_____	_____	_____
Elevation Cylinder Hose Assys	_____	_____	_____
Elevation Cylinder Swivel Joint & Elbows	_____	_____	_____
Elevation Cylinder Assy	_____	_____	_____
Elevation Cylinder Manifold	_____	_____	_____
Elevation Cylinder	_____	_____	_____
Turnbuckle Connecting Rod	_____	_____	_____
Elevation Cylinder Linkage Adjustment	_____	_____	_____
Connecting Rod	_____	_____	_____
Pivot Pin	_____	_____	_____
Pivot Bearings	_____	_____	_____
Center Sheath	_____	_____	_____
Shield	_____	_____	_____
Launcher Platform Rail	_____	_____	_____
Travel Lock Assy	_____	_____	_____
Pivot Assy	_____	_____	_____
Bumper	_____	_____	_____
Stop	_____	_____	_____
Bracket, Connecting Rod	_____	_____	_____
Mercury Switch Box	_____	_____	_____
Pendulum Box Assy	_____	_____	_____
Rockets Power Distribution Box	_____	_____	_____
Rocker Arm	_____	_____	_____
Support Arm	_____	_____	_____

Checklist
APPENDIX A

COMPONENT	PASS	FAIL	REMARKS:
Arm Sheath	<input type="checkbox"/>	<input type="checkbox"/>	
Port/Starboard Intermediate Sheath	<input type="checkbox"/>	<input type="checkbox"/>	
Sequence Lock Manifold	<input type="checkbox"/>	<input type="checkbox"/>	
Sequence Lock Manifold Hydraulic Assys	<input type="checkbox"/>	<input type="checkbox"/>	
Support Arm Tube Assys	<input type="checkbox"/>	<input type="checkbox"/>	
Elbow	<input type="checkbox"/>	<input type="checkbox"/>	
Elbow Bracket	<input type="checkbox"/>	<input type="checkbox"/>	
Three-Hole Bulkhead	<input type="checkbox"/>	<input type="checkbox"/>	
Tube Angle Mounting	<input type="checkbox"/>	<input type="checkbox"/>	
Launcher Housing Tube Assy	<input type="checkbox"/>	<input type="checkbox"/>	
Junction Box A	<input type="checkbox"/>	<input type="checkbox"/>	
Junction Box B	<input type="checkbox"/>	<input type="checkbox"/>	
Limit Switch	<input type="checkbox"/>	<input type="checkbox"/>	
Limit Switch Arm Bracket	<input type="checkbox"/>	<input type="checkbox"/>	
Wiring Harness W15	<input type="checkbox"/>	<input type="checkbox"/>	
Latch Pivot Bracket	<input type="checkbox"/>	<input type="checkbox"/>	
Latch Spring	<input type="checkbox"/>	<input type="checkbox"/>	
Test Plugs	<input type="checkbox"/>	<input type="checkbox"/>	
Nipple	<input type="checkbox"/>	<input type="checkbox"/>	
Coupler	<input type="checkbox"/>	<input type="checkbox"/>	
Lower Seal	<input type="checkbox"/>	<input type="checkbox"/>	
Sheath	<input type="checkbox"/>	<input type="checkbox"/>	
Intermediate Housing Sheath	<input type="checkbox"/>	<input type="checkbox"/>	
Port Housing Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Starboard Housing Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Forward Port Housing Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Port Housing Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Forward Starboard Housing Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Starboard Housing Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Port/Starboard Bar	<input type="checkbox"/>	<input type="checkbox"/>	
Swivel Elbow (Port H2)	<input type="checkbox"/>	<input type="checkbox"/>	
Tie-Down and Adapter Assy	<input type="checkbox"/>	<input type="checkbox"/>	
Tie-Down Adapter	<input type="checkbox"/>	<input type="checkbox"/>	
Tie-Down Assy	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Wall Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Guard Assy	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Port Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Starboard Guard	<input type="checkbox"/>	<input type="checkbox"/>	
Forward Guard Assy	<input type="checkbox"/>	<input type="checkbox"/>	
Cable Guide	<input type="checkbox"/>	<input type="checkbox"/>	
Starboard Cable Guide	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Port Cable Guide	<input type="checkbox"/>	<input type="checkbox"/>	
Lower Engine Access Cover Latch	<input type="checkbox"/>	<input type="checkbox"/>	
Upper Engine Access Cover Striker	<input type="checkbox"/>	<input type="checkbox"/>	
Rail	<input type="checkbox"/>	<input type="checkbox"/>	
Center Channel Assy	<input type="checkbox"/>	<input type="checkbox"/>	
Aft Pallet Rail Tie-Down Bracket	<input type="checkbox"/>	<input type="checkbox"/>	

Checklist
APPENDIX A

COMPONENT	PASS	FAIL	REMARKS:
Port/Starboard Ramp	_____	_____	_____
Rear Pallet Assy	_____	_____	_____
Wear Plate	_____	_____	_____
Quick Release Pins	_____	_____	_____
Starboard Ramp Crossmember	_____	_____	_____
Ramp Wear Plates	_____	_____	_____
Aft Pallet	_____	_____	_____
Forward Pallet Assy	_____	_____	_____
Housing to Forward Pallet Hose Assys	_____	_____	_____
Capstan Hydraulic Hose Assy	_____	_____	_____
Forward Pallet Rail Tie-Down Bracket	_____	_____	_____
Quick Disconnect Coupler Fitting	_____	_____	_____
Power Distribution Box Assy	_____	_____	_____
Quick Disconnect Nipple Fitting	_____	_____	_____
200A Circuit Breaker	_____	_____	_____
2A Circuit Breaker	_____	_____	_____
10A Circuit Breaker	_____	_____	_____
200A Relay	_____	_____	_____
10A Relay	_____	_____	_____
Terminal Block	_____	_____	_____
Indicator Light Assy	_____	_____	_____
Toggle Switch	_____	_____	_____
Slave Plug	_____	_____	_____
Capstan with Hydraulic Motor Assy	_____	_____	_____
Capstan Drum	_____	_____	_____
Reduction Gearbox	_____	_____	_____
Reduction Gearbox Lubricating Oils	_____	_____	_____
Reduction Gearbox Oil Change	_____	_____	_____
Hydraulic Filter Change	_____	_____	_____
Capstan Hydraulic Motor	_____	_____	_____
Hydraulic Power Unit	_____	_____	_____
Manual Hydraulic Pump	_____	_____	_____
Manual Hydraulic Pump Handle	_____	_____	_____
Electric Motor/Hydraulic Pump	_____	_____	_____
Electric Motor/Hydraulic Pump	_____	_____	_____
Control Manifold	_____	_____	_____
Reservoir Assy	_____	_____	_____
Sight Glass	_____	_____	_____
Relief Valve	_____	_____	_____
Pressure Gauge	_____	_____	_____
Manual Pump Outlet Tube	_____	_____	_____
Manual Pump Inlet Tube	_____	_____	_____
Clip Spring	_____	_____	_____
Hydraulic Pump Inlet Tube	_____	_____	_____
Hydraulic Pump Outlet Tube	_____	_____	_____
Wiring Harness W12	_____	_____	_____
Wiring Harness W13	_____	_____	_____

Checklist
APPENDIX A

COMPONENT	PASS	FAIL	REMARKS:
Wiring Harness W14	_____	_____	_____
Arm Switch	_____	_____	_____
Control Box	_____	_____	_____
Control Box & Mounting	_____	_____	_____
Brackets Assy	_____	_____	_____
Brackets	_____	_____	_____
Lamps	_____	_____	_____
Selector Knob	_____	_____	_____
Toggle Switch Guard	_____	_____	_____
Receptacles	_____	_____	_____
Receptacle Connections	_____	_____	_____
10A Relay	_____	_____	_____
Relay Connections	_____	_____	_____
Filters	_____	_____	_____
Filter Connections	_____	_____	_____
System Power Switch	_____	_____	_____
System Power Switch Connections	_____	_____	_____
Panel Light	_____	_____	_____
Panel Light Connections	_____	_____	_____
Push Switches	_____	_____	_____
Push Switch Connections	_____	_____	_____
Rotary Switch	_____	_____	_____
Rotary Switch Connections	_____	_____	_____
Launch Angle Indicator	_____	_____	_____
Circuit Board Assy	_____	_____	_____
Circuit Board Assembly Connections	_____	_____	_____
Indicator Light	_____	_____	_____
Indicator Light Connections	_____	_____	_____
Raise/Lower Switch	_____	_____	_____
Raise/Lower Switch Connections	_____	_____	_____
Electric Wire	_____	_____	_____
Wire Connections	_____	_____	_____
Container, Top	_____	_____	_____
Container , Bottom	_____	_____	_____
Gasket, Container Joint	_____	_____	_____

**LIST OF DEFECTIVE PARTS
AND ASSEMBLIES****APPENDIX B**

COMPONENT	REMARKS:
Mast Assy	
External-Actuator Cover	
Actuator Arm Lever	
Housing to Actuator Assy	
Hose Assy, Starboard	
Starboard Actuator Manifold	
Starboard Actuator Assy	
Housing-Actuator Hydraulic Hse Assy, Port	
Housing - Actuator Hydraulic System, Port	
Port Actuator Manifold	
Port Actuator Assy	
Starboard/Port Hinge Arm	
Starboard Door Assy	
Door Seals	
Door Latch Rod, Starboard Door	
Port Door Assy	
Wiring Harness W16	
Platform, Equipped for Access	
Launcher Cylinder Hydraulic Hose Assy	
Launch Cylinder Hose Assys	
Launcher Cylinder	
Launcher Cylinder Swivel Joint	
Elevation Cylinder Hose Assys	
Elevation Cylinder Swivel Joint & Elbows	
Elevation Cylinder Assy	
Elevation Cylinder Manifold	
Elevation Cylinder	
Turnbuckle Connecting Rod	
Elevation Cylinder Linkage Adjustment	
Connecting Rod	
Pivot Pin	
Pivot Bearings	
Center Sheath	
Shield	
Launcher Platform Rail	
Travel Lock Assy	
Pivot Assy	
Bumper	
Stop	
Bracket, Connecting Rod	
Mercury Switch Box	
Pendulum Box Assy	
Rockets Power Distribution Box	
Rocker Arm	
Support Arm	
Arm Sheath Port/Starboard	
Intermediate Sheath	

LIST OF DEFECTIVE PARTS AND ASSEMBLIES

APPENDIX B

COMPONENT	REMARKS:
Sequence Lock Manifold	
Sequence Lock Manifold Hydraulic Assy	
Support Arm Tube Assys	
Elbow	
Elbow Bracket	
Three-Hole Bulkhead Tube	
Angle Mounting	
Launcher Housing	
Tube Assys	
Junction Box A	
Junction Box B	
Limit Switch	
Limit Switch Arm Bracket	
Wiring Harness W15	
Latch Pivot Bracket	
Latch Spring	
Test Plugs	
Nipple	
Coupler	
Lower Seal	
Sheath	
Intermediate Housing Sheath	
Port Housing Guard Starboard Housing Guard	
Forward Port Housing Guard	
Aft Port Housing Guard	
Forward Starboard Housing Guard	
Aft Starboard Housing Guard	
Port/Starboard Bar	
Swivel Elbow (Port H2)	
Tie-Down and Adapter Assy	
Tie-Down Adapter	
Tie-Down Assy Aft Wall	
Guard Aft Guard Assy Aft Port Guard Aft Starboard Guard Forward Guard Assy Cable Guide Starboard Cable Guide Aft Port Cable Guide Lower Engine Access Cover Latch Upper Engine Acc Cover Strike Rail Center Channel Assy	
Aft Pallet Rail Tie-Down Bracket	
Port/Starboard Ramp	
Rear Pallet Assy	
Wear Plate	
Quick Release Pins	
Starboard Ramp Crossmember	
Ramp Wear Plates	
Aft Pallet	

**LIST OF DEFECTIVE PARTS
AND ASSEMBLIES****APPENDIX B**

COMPONENT	REMARKS:
Forward Pallet Assy	
Housing to Forward Pallet Hose Assys	
Capstan Hydraulic Hose Assys	
Forward Pallet Rail Tie-Down Bracket	
Quick Disconnect Coupler Fitting	
Power Distribution Box Assy	
Quick Disconnect Nipple Fitting 200A	
Circuit Breaker	
2A Circuit Breaker	
10A Circuit Breaker	
200A Relay	
10A Relay	
Terminal Block Indicator Light Assy	
Toggle Switch Slave Plug Capstan with	
Hydraulic Motor Assy Capstan Drum	
Reduction Gearbox	
Reduction Gearbox Lubricating Oils	
Reduction Gearbox Oil Change	
Hydraulic Filter Change	
Capstan Hydraulic Motor	
Hydraulic Power Unit	
Manual Hydraulic Pump	
Manual Hydraulic Pump Handle	
Electric Motor/Hydraulic Pump	
Electric Motor/Hydraulic Pump	
Control Manifold	
Reservoir Assy	
Sight Glass	
Relief Valve	
Pressure Gauge	
Manual Pump Outlet Tube	
Manual Pump Inlet Tube	
Clip Spring	
Hydraulic Pump Inlet Tube	
Hydraulic Pump Outlet Tube	
Wiring Harness W12	
Wiring Harness W13	
Wiring Harness W14	
Arm Switch	
Control Box	
Control Bx & Mounting Brackets Assy	
Brackets	
Lamps	
Selector Knob	
Toggle Switch Guard	
Receptacles	
Receptacle Connections	

17 September 2003

LIST OF DEFECTIVE PARTS AND ASSEMBLIES

APPENDIX B

COMPONENT

REMARKS:

- 10A Relay
- Relay Connections
- Filters
- Filter Connections
- System Power Switch
- System Power Switch Connections
- Panel Light
- Panel Light Connections
- Push Switches
- Push Switch Connections
- Rotary Switch
- Rotary Switch Connections
- Launch Angle Indicator
- Circuit Board Assy
- Circuit Board Assy Connections
- Indicator Light
- Indicator Light Connections
- Raise/Lower Switch
- Raise/Lower Switch Connections
- Electric Wire
- Wire Connections
- Container, Top
- Container , Bottom
- Gasket, Container Joint

ADDITIONAL OBSERVATIONS:

17 September 2003

LIST OF REPAIR PARTS AND ASSEMBLIES REQUIRED FOR REPAIRS APPENDIX C

MK154 Serial number: _____

ADDITIONAL COMMENTS AND OBSERVATIONS: Please annotate and initial.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**LIST OF REPAIR PARTS AND
ASSEMBLIES REQUIRED FOR
REPAIRS
APPENDIX C**

COMPONENT**REMARKS:**

Mast Assy
External-Actuator Cover
Actuator Arm Lever
Housing to Actuator Assy Hose
Assy, Strbrd Starboard Starboard
Actuator Manifold
Starboard Actuator Assy
Housing-Actuator Hydraulic Hse
Assy, Port
Housing – Actuator Hydraulic
System, Port
Port Actuator Manifold
Port Actuator Assy
Starboard/Port Hinge Arm
Starboard Door Assy
Door Seals
Door Latch Rod, Starboard Door
Port Door Assy
Wiring Harness W16
Platform, Equipped for Access
Launcher Cylinder Hydraulic Hose
Assy
Launch Cylinder Hose Assys
Launcher Cylinder
Launcher Cylinder Swivel Joint
Elevation Cylinder Hose Assys
Elevation Cylinder Swivel Joint &
Elbows
Elevation Cylinder Assy
Elevation Cylinder Manifold
Elevation Cylinder
Turnbuckle Connecting Rod
Elevation Cylinder Linkage
Adjustment
Connecting Rod
Pivot Pin
Pivot Bearings
Center Sheath
Shield
Launcher Platform Rail
Travel Lock Assy
Pivot Assy
Bumper
Stop
Bracket, Connecting Rod

**LIST OF REPAIR PARTS AND
ASSEMBLIES REQUIRED FOR
REPAIRS
APPENDIX C**

COMPONENT	REMARKS:
Mercury Switch Box Pendulum Box	
Assy	
Rockets Power Distribution Box	
Rocker Arm Support Arm Arm	
Sheath Port/Starboard Intermediate	
Sheath	
Sequence Lock Manifold	
Sequence Lck Manifold Hydraul Assy	
Support Arm Tube Assys	
Elbow	
Elbow Bracket Three-Hole Bulkhead	
Tube Angle Mounting	
Launcher Housing Tube Assys	
Junction Box A	
Junction Box B	
Limit Switch	
Limit Switch Arm Bracket Wiring	
Harness W15	
Latch Pivot Bracket	
Latch Spring	
Test Plugs	
Nipple	
Coupler	
Lower Seal	
Sheath	
Intermediate Housing Sheath	
Port Housing Guard Starboard	
Housing Guard	
Forward Port Housing Guard	
Aft Port Housing Guard	
Forward Starboard Housing Guard	
Aft Starboard Housing Guard	
Port/Starboard Bar	
Swivel Elbow (Port H2)	
Tie-Down and Adapter Assy	
Tie-Down Adapter	
Tie-Down Assy Aft Wall Guard Aft	
Guard Assy Aft Port Guard Aft	
Starboard Guard Forward Guard Assy	
Cable Guide Starboard Cable Guide	
Aft Port Cable Guide Lower Engine	
Access Cover Latch Upper Eng	
Access Cover Striker Rail	
Center Channel Assy	
Aft Pallet Rail Tie-Down Bracket	

**LIST OF REPAIR PARTS AND
ASSEMBLIES REQUIRED FOR
REPAIRS
APPENDIX C**

COMPONENT	REMARKS:
Port/Starboard Ramp	
Rear Pallet Assy	
Wear Plate	
Quick Release Pins	
Starboard Ramp Crossmember	
Ramp Wear Plates	
Aft Pallet	
Forward Pallet Assy	
Housing to Forward Pallet Hose Assy	
Capstan Hydraulic Hose Assys	
Forward Pallet Rail Tie-Down	
Bracket	
Quick Disconnect Coupler Fitting	
Power Distribution Box Assy	
Quick Disconnect Nipple Fitting	
200A Circuit Breaker	
2A Circuit Breaker	
10A Circuit Breaker	
200A Relay	
10A Relay	
Terminal Block Indicator Light Assy	
Toggle Switch Slave Plug Capstan	
with Hydraulic Motor Assy Capstan	
Drum Reduction Gearbox	
Reduction Gearbox Lubricating Oils	
Reduction Gearbox Oil Change	
Hydraulic Filter Change	
Capstan Hydraulic Motor	
Hydraulic Power Unit	
Manual Hydraulic Pump	
Manual Hydraulic Pump Handle	
Electric Motor/Hydraulic Pump	
Electric Motor/Hydraulic Pump	
Control Manifold	
Reservoir Assy	
Sight Glass	
Relief Valve	
Pressure Gauge	
Manual Pump Outlet Tube	
Manual Pump Inlet Tube	
Clip Spring	
Hydraulic Pump Inlet Tube	
Hydraulic Pump Outlet Tube	
Wiring Harness W12	
Wiring Harness W13	

17 September 2003

**LIST OF REPAIR PARTS AND
ASSEMBLIES REQUIRED FOR
REPAIRS
APPENDIX C**

COMPONENT**REMARKS:**

Wiring Harness W14

Arm Switch

Control Box

Contrl Bx & Mounting Brackets Assy

Brackets

Lamps

Selector Knob

Toggle Switch Guard

Receptacles

Receptacle Connections

10A Relay

Relay Connections

Filters

Filter Connections

System Power Switch

System Power Switch Connections

Panel Light

Panel Light Connections

Push Switches

Push Switch Connections

Rotary Switch

Rotary Switch Connections

Launch Angle Indicator

Circuit Board Assy

Circuit Board Assy Connections

Indicator Light

Indicator Light Connections

Raise/Lower Switch

Raise/Lower Switch Connections

Electric Wire

Wire Connections

Container, Top

Container , Bottom

Gasket, Container Joint

ADDITIONAL NOTES:

(1 Data Item)

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

G. PREPARED BY <i>[Signature]</i>	H. DATE 7-25-03	I. APPROVED BY <i>[Signature]</i>	J. DATE 8-21-03
--------------------------------------	--------------------	--------------------------------------	--------------------

18. ESTIMATED TOTAL PRICE	
------------------------------	--